

REMARKS

In the January 3, 2005 Office Action, the Examiner noted that claims 1-27 were pending in the application; rejected claims 1-27 under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-18 of U.S. Patent Application Serial No. 09/942,736; rejected claims 1, 3-5, 7, 8, 10-12, 14, 15, 17-19, 21, 22 and 24-27 under 35 USC § 102(b); and rejected claims 2, 6, 9, 13, 16, 20 and 23 under 35 USC § 103(a). In rejecting the claims, U.S. Patent 6,076,060 to Lin et al. was cited. Claims 1-27 remain in the case. The Examiner's rejections are traversed below.

The Application

The subject application is directed to grapheme/phoneme conversion of a word by decomposing a word into subwords and using grapheme/phoneme conversion to obtain transcriptions of the subwords. For graphemes bordering on an interface between subwords, the grapheme/phoneme conversion is recalculated as a function of the context of that interface, as explained in paragraph [0011]. In the example described in paragraphs [0019] to [0037] a neural network and a special lexicon is used that contains information as to which grapheme group belongs to which sound (see paragraph [0031]).

Prior Art: U.S. Patent 6,076,060 to Lin et al.

The Lin et al. patent is directed to grapheme/phoneme conversion of a word which is not contained as a whole in a pronunciation lexicon by employing a suffix rule set for matching substrings from the end of the input text string to suffix rules, a prefix rule set for matching substrings from the beginning of the input text string to prefix rules and an infix rule set for matching substrings taken from the middle of the input text or any remaining text not matched by either the suffix or prefix rules. Phonemic data is produced for any portion of the input text that matches a particular rule. The method taught by Lin et al. assumes that after comparing from right-to-left and left-to-right, that "all characters of the input word ... will have been matched to rules in either the suffix, prefix, or infix rule sets" (column 14, lines 14-15). No suggestion has been found in this portion or any portion of Lin et al. that any recalculation is performed at the borders between the prefix, infix and suffix.

Double Patenting Rejection

In item 2 on page 2 of the Office Action, claims 1-27 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims

1-18 of U.S. Patent Application Serial No. 09/942,736. All of the independent claims of the subject application have been amended to add "as a function of the context of the at least one interface" to clarify how the recalculating of grapheme-phoneme conversion is performed. The '736 application discloses a method of speech synthesis by grapheme/phoneme conversion, where a subword of a given word is searched in a database and a phonetic transcription from the database for the subword is selected. A further constituent of the given word is phonetically transcribed as a function of the phonetic transcription of the subword. The phonetic transcription of the subword and the phonetic transcription of the further constituent are then combined. An out-of-vocabulary treatment is supplied to the further constituent based on the phonetic transcription of the subword. There is no operation recited in the claims of the '736 application corresponding to what is recited on the last two lines of claim 1 and similarly recited in the other claims of the subject application. Therefore, withdrawal of double patenting rejection is respectfully requested.

Prior Art Rejections

All of the claims were rejected as either anticipated by or unpatentable over Lin et al. However, as discussed above, nothing has been cited or found in Lin et al. of any recalculating grapheme/phoneme conversion. There is a two-step matching operation performed to determine the interfaces between subwords, but once the subwords are determined, a single grapheme-phoneme conversion is performed. Furthermore, there is no suggestion that any operation is performed "as a function of the context of the at least one interface" (as now recited in all of the independent claims). As described in paragraphs [0022] - [0037] of the subject application, recalculating the "grapheme-phoneme conversion of the graphemes bordering on the at least one interface between the subwords as a function of the context of the at least one interface" (e.g., claim 1, last 2 lines) can be used to correct errors that occur when pronunciation of a word is based solely on subwords found in a lexicon.

For at least the reasons discussed above, it is submitted that claims 1-27 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 09/942,735

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: Richard A. Gollhofer
Richard A. Gollhofer
Registration No. 31,106

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501